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10/587,010	07/21/2006	Daisuke Kumaki	0553-0506	9347
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COOK ALEX LTD SUITE 2850 200 WEST ADAMS STREET CHICAGO, IL 60606				
EXAMINER				
GARRETT, DAWN L				
ART UNIT		PAPER NUMBER		
1794				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/587,010

## Applicant(s)

KUMAKI ET AL.

## Examiner

Dawn Garrett

## Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 4-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office action is in response to the election response received October 27, 2009. Applicant elected Group I (Claims 1, 2, 3, 11 and 12). Claims 4-10 are withdrawn as non-elected. Claims 1-3, 11 and 12 are under consideration.
2. This application is a 371 of PCT/JP05/20687 filed 11/4/2005.

### ***Specification***

3. The abstract of the disclosure is objected to because the abstract sets forth the phrase "An object of the present invention" and it appears this phrase should be "An object of the present invention". Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Liao et al. (US 6,717,358 B1).

Liao et al. sets forth cascaded organic electroluminescent devices comprising a plurality of organic electroluminescent units between an anode and cathode wherein connecting units comprising an n-type doped layer and p-type doped layer are disposed between the multiple electroluminescent units (see abstract and figures).

The anode corresponds to the instant "second electrode" and the cathode corresponds to the instant "first electrode". An EL unit, which corresponds to the "third layer" comprising a luminescent substance is directly adjacent the anode (see Fig. 1).

A p-type doped organic layer of a connecting unit (see Fig. 2) comprises a host material comprising hole transporting tertiary amine compounds (see col. 8, lines 16-34) and a p-type dopant (acceptor) comprising TCNQ (see col. 8, lines 35-48). The p-type layer reads upon the instant "first layer". Regarding claim 3, the amount of p-type dopant is 0.01 to 20 vol. % (see col. 7, lines 39-44).

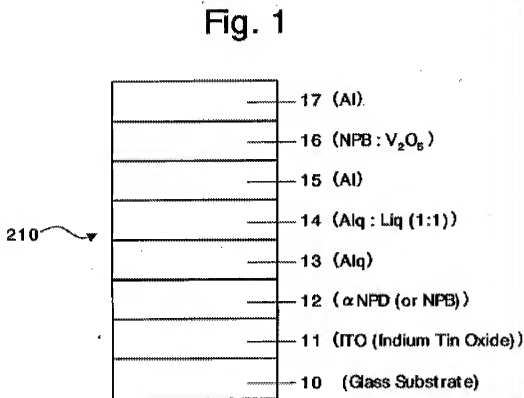
A n-type doped organic layer of a connecting unit (see Fig. 2) comprises an electron transporting material (see col. 7, lines 45-55) and a n-type dopant (donator) comprising alkali metals and alkaline earth metals (see col. 7, lines 60-65). The n-type layer reads upon the instant "second layer".

Regarding claim 1, the p-type layer is considered to be electrically "in contact" with the cathode via other layers. See col. 5, lines 27-53 discussion of application of electric potential through the device. [Also the examiner notes with regard to the "third layer" in contact with the second electrode, applicant's Fig. 1 shows the light emitting layer 822 as part of larger unit layer 813 as "in contact" with the second electrode (802). Liao clearly shows an EL unit next to the anode.]

Regarding the limitation that the layers are laminated sequentially, the claim does not exclude other layers from being present in between the required layers. Liao et al. clearly sets forth layers in a sequence meeting the requirements of claims 1-3.

6. Claims 1-3 are rejected under 35 U.S.C. 102(a) as being anticipated by Matsumoto et al. (US 2005/0098207 A1). [Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.]

Matsumoto et al. discloses organic electroluminescent devices as shown in Fig. 1:



In the above figure of an exemplified device, ITO reads upon the "second electrode", Alq is the "third layer" comprising a light emitting substance, the NPB:vanadium oxide layer reads upon the "first layer" and the Alq:Li layer reads upon the "second layer" (see Figure 1 and document). In example 1, per the "first layer", NPB and vanadium oxide are formed in a molar ratio of 1:1 (see par. 109).

With regard to the "third layer" in contact with the second electrode per claim 1, applicant's instant Fig. 1 shows the light emitting layer 822 as part of larger unit layer 813 as "in contact" with the second electrode (802). Accordingly, in Matsumoto et al. the layer of Alq as part of the light emitting functional layers of the above Figure 1 are considered to be "in contact" with the ITO anode.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao et al. (US 6,717,358 B1) in view of Thompson et al. (US 6,150,043). Liao et al. is relied upon for the disclosure of the light emitting element of claims 1-3.

Liao et al. clearly teaches the formation of organic light emitting devices (OLEDs) for the emission of light. Liao et al. does not expressly describe the various applications and uses for the OLEDs. Thompson et al. teaches in analogous art OLEDs are incorporated into a larger display and electronic appliances such as a billboard, sign, television or printer (see col. 16, lines 26-31). Thompson et al. also teaches OLEDs are used as display pixels to provide full color emission (see col. 1, lines 20-67). It would have been obvious to one of ordinary skill in the art to have formed an emitting device or electron appliance incorporating the OLEDs taught by Liao et al., because one would expect the OLEDs to provide the desired function of light emission for

the device comprising pixels or for an electronic appliance having a display since OLEDs are taught as useful for forming a light emitting display.

9. Claims 11 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Matsumoto et al. (US 2005/0098207 A1) in view of Thompson et al. (US 6,150,043). Matsumoto et al. is relied upon for the disclosure of the light emitting element of claims 1-3.

Matsumoto et al. clearly teaches the formation of organic light emitting devices (OLEDs) for the emission of light. Matsumoto et al. does not expressly describe the various applications and uses for the OLEDs. Thompson et al. teaches in analogous art OLEDs are incorporated into a larger display and electronic appliances such as a billboard, sign, television or printer (see col. 16, lines 26-31). Thompson et al. also teaches OLEDs are used as display pixels to provide full color emission (see col. 1, lines 20-67). It would have been obvious to one of ordinary skill in the art to have formed an emitting device or electron appliance incorporating the OLEDs taught by Matsumoto et al., because one would expect the OLEDs to provide the desired function of light emission for the device comprising pixels or for electronic appliance having a display since OLEDs are taught as useful for forming a light emitting display.

#### ***Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

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*Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-3, 11 and 12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 5, 7, 8, 10, 11, 17, 18, 20, 21, 23, 24, 26, and 27 of U.S. Patent No. 7,564,052. Although the conflicting claims are not identical, they are not patentably distinct from each other because although the wording is not identical and ‘052 specifies “TPAQn” as a first layer material, ‘052 claims a first, second, and third layer for a light emitting element comprising material within the limitations of instant claims 1-3, 11 and 12.

12. Claims 1-3, 11 and 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5, 6, 14, 15, 21 of copending Application No. 10/582,249. Although the conflicting claims are not identical, they are not patentably distinct from each other because although the claim wording is not identical, the specific materials claimed for the first, second and third layers by ‘249 meet the requirements for materials of the layers of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.



***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dawn Garrett/  
Primary Examiner, Art Unit 1794

December 19, 2009